

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Canceled)
2. (Currently Amended) A packet-switched network system according to claim 1

comprising

a multiplicity of multi-port network units each of which has first and second ports and other ports; and

transmission links coupling the first and second ports of said units in a closed ring, said first and second ports and said transmission links supporting duplex transmission of data packets;

wherein each unit transmits from said first and second ports packets including selected information enabling on reception of a packet at any of the units a determination of a number of hops from unit to unit around said ring said packet has made, each unit has a forwarding database and in response to the said selected information controls the transmission of said packets in two directions around said ring, and each unit causes discard of packets which have according to said selected information circumnavigated the ring; and

wherein each unit includes means responsive to said selected information (i) to determine the number of hops from unit to unit around the ring a received packet has made; (ii) when the number is less than half the total number of hops around the ring, to learn a source address of the packet as that one of the said first and second ports at which the packet was received; (iii) when the number is greater than half the total number of hops around the ring, to learn a source address for the packet as that one of the first and second ports other than that at which the packet was

received; and (iv) when the number is equal to the total number of hops around the ring, to cause discard of the packet.

3. (Canceled)

4. (Currently Amended) A ~~system according to claim 3~~ network unit comprising a multiplicity of ports including first and second ports for connection of said unit in a closed ring with other network units, said first and second ports supporting duplex transmission of data packets, said unit being operative:

(a) to transmit from and receive at said first and second ports Ethernet packets including selected information enabling on reception of a packet at any of the units a determination of a number of hops from unit to unit around said ring said packet has made;

(b) in response to the said selected information to control the transmission of said packets in two directions around said ring; and

(c) to cause discard of packets which have according to said selected information circumnavigated the ring;

wherein each unit includes means responsive to said selected information:

(i) to determine the number of hops from unit to unit around the ring a received packet has made;

(ii) when said number of hops is less than half the total number of hops around the ring, to learn a source address of the packet as that one of the said first and second ports at which the packet was received;

(iii) when the said number of hops is greater than half the total number of hops around the ring, to learn a source address for the packet as that one of the first and second ports other than that at which the packet was received; and

(iv) when the said number of hops is equal to the total number of hops around the ring, to cause discard of the packet.

5. (Canceled)

6. (Currently Amended) A method ~~according to claim 5~~ of operating a packet-switched network system comprising a multiplicity of multi-port network units each of which has first and second ports and other ports and transmission links coupling the first and second ports of the units in a closed ring, said first and second ports and said transmission links supporting duplex transmission of data packets, the method comprising:

transmitting from said first and second ports of each unit Ethernet packets including selected information enabling on reception of a packet at any of the units a determination of a number of hops from unit to unit around said ring said packet has made; controlling in response to the said selected information the transmission of said packets in two directions around said ring; and

discarding packets which have according to said selected information circumnavigated the ring;

wherein said method includes:

(i) determining the number of hops from unit to unit around the ring a received packet has made;

(ii) when the number is less than half the total number of hops around the ring, learning the source address of the received packet as that one of the said first and second ports at which the packet was received;

(iii) when the number is greater than half the total number of hops around the ring, learning a source address for the received packet as that one of the first and second ports other than that at which the packet was received; and

(iv) when the number is equal to the total number of hops around the ring, causing discard of the received packet.